COMMITMENT THREE:

We will pursue participatory and sustainable food, agriculture, fisheries, forestry and rural development policies and practices in high and low potential areas, which are essential to adequate and reliable food supplies at the household, national, regional and global levels, and combat pests, drought and desertification, considering the multifunctional character of agriculture.

OBJECTIVES AND ACTIONS

OBJECTIVE 3.1: To pursue, through participatory means, sustainable, intensified and diversified food production, increasing productivity, efficiency, safety gains, pest control and reduced wastes and losses, taking fully into account the need to sustain natural resources.

To this end, governments, in partnership with all actors of civil society, and with the support of international institutions, will, as appropriate:	Domestically:	Internationally:
(a) Establish policies and implement programmes to optimize, in an economically, socially and environmentally sound manner, sustainable agriculture, fisheries and forestry production, particularly of the main staple foods, aimed at achieving food security;	The U.S. recognizes that sustainable use of technology and natural resources is essential to maintain agricultural productivity. The Natural Resources Conservation Service of the U.S. Department of Agriculture (USDA) has policies and programs to conserve soil and water resources by controlling erosion, to protect prime farmland from conversion to nonagricultural uses, to support initiatives for environmentally friendly pest management techniques and integrated pest management programs, to manage animal waste to avoid pollution of ground and surface water, to reduce agricultural damage to air and water quality, and to reduce consumption of non-renewable energy in agricultural production.	See 1.1 (b), 1.2 (a), 1.4 (b), 2.1 (c), 3.1 (a), 3.1 (b),3.2 (a), 3.2 (c), 3.3 (d), 3.4 (a), 3.4 (g), 3.5 (a), 4.3 (a), and 6.1 (a) Several dozen U.S. organizations support agricultural development programs with small-scale farmers in developing countries. Many support training and extension programs that reach poor farmers that governments fail to reach. Often the promote an agro-ecological approach to production that emphasizes household food security, natural resources management and conservation, and locally appropriate crops and technologies.
(b) Promote policies and programmes which encourage appropriate input technologies, farming techniques, and other sustainable methods, such as organic farming, to assist farming operations to become profitable, with the goal of reducing environmental degradation, while creating financial resources within the farming operation; such programmes should, when relevant, build upon farmers' own experiences and indigenous knowledge;	The Henry A. Wallace Institute for Alternative Agriculture, with funding from the W.K. Kellogg Foundation, is a five-year project that will foster the development of shared visions of what the agriculture and food system might look like in the future. The project will ultimately translate the local and regional visions for the future of our food and agriculture system into policies designed to promote a sustainable agriculture and food system. Sustainable Agriculture Research and Education (SARE), a USDA program authorized by the Farm Bill, is a federal competitive grants program with a mission to increase knowledge about -- and help farmers adopt -- more sustainable practices that are profitable, environmentally	The purpose of the SANREM CRSP is to stimulate and support innovative systems-based research to identify and develop sustainable agricultural production and natural resource management systems in developing counties, to bring about sustainable agriculture in the context of the local setting. A variety of civil society organizations form the Pesticide Action Network, which works to promote the use of integrated pest management and to advocate government and international financial institution policies that build on integrated pest management methods. See also 2.1 (d), 2.3 (c), 3.1 (a), 3.2 (a), 3.2 (b), 3.2 (c), 3.2

sound, and beneficial to local communities and society in general. SARE provides funding for research, demonstration, education, and extension projects carried out by scientists, producers, educators, and private sector representatives. The Sustainable Agriculture Network (SAN) serves as SARE's outreach arm, disseminating information through electronic and print publications.

Five regional Sustainable Agriculture Working Groups (SAWGs) are regional groupings of non-profit organizations and independent farmers that work together to explore and promote economically viable, environmentally sound and socially responsible farm and food systems.

The Appropriate Technology Transfer for Rural Areas (ATTRA) is the national sustainable agriculture information center.

The Alternative Farming Systems Information Center (AFSIC), one of 10 information centers at the National Agricultural Library, specializes in locating, collecting, and providing information to private citizens about sustainable and alternative agricultural systems and crops.

New draft regulations certifying organic foods are scheduled to be released in 1997 by the USDA's Agricultural Marketing Service. The National Organic Standards Board (NOSB) sets standards, assures integrity of products, provides enforcement and will help make much more organic food available in local communities. This will enable producers to meet the fast growing domestic organic food demand, spurring local economic development and new business opportunities.

Funded by the W.K. Kellogg Foundation, a national Integrated Farming systems (IFS) Network addresses barriers to sustainable food and farming systems primarily through support of community-based demonstration projects that innovatively address issues of agricultural viability and productivity; environmental protection, and rural community vitality.

(e), 3.2 (g), 3.4 (i), 3.5 (f), 3.5 (k), 6.2 (b), and 6.2 (c).

(c) Promote the conservation and sustainable use of biological diversity and its components in terrestrial and marine ecosystems, with a view to enhancing food security, notably through supporting the UN Convention on Biological Diversity, 1992;	The United States is committed to sustainable use of our terrestrial and marine ecosystems. Specific actions and projects are addressed at other points in this paper. The USDA's Cooperative State Research, Education, and Extension Service (CSREES) has a number of programs which promote sustainable development. It also maintains an Alternative Farming Systems Information Center in USDA's National Agricultural Library which provides information on sustainable, low-input, organic, bio-dynamic and regenerative agriculture, as well as alternative crops and new crops for traditional uses.	The United States supports a major effort to conserve biological diversity, whose disappearance has serious implications worldwide. U.S. resources strengthen 100 protected areas, more than 100 million acres worldwide. These areas cover a wide range of ecosystems -- deserts, wetlands, savannas, rain forests, and coral reefs -- in countries ranging from Brazil to Uganda. It has established environmental endowment funds in several countries.
(d) Promote sustainable development in mixed-farming systems and the processing and marketing of diverse food products and by-products, in response to the needs of the consumers for properly balanced diets;	Ongoing research in animal genetics is carried on by the National Animal Genome Research Program (NAGRP) which is a coordinated program to map the genome of domestic species.	n.a.
(e) Promote crop and livestock productivity through widespread use of improved seeds and breeds and integrated plant nutrition system methods, where necessary and ecologically and economically feasible; in addition, seek to achieve lasting fertility improvements in tropical soils;	CSREES's Crop Nutrient Management/Soil Fertility program assists in the response to soils resource management priorities. CSREES also has a program on Tropical/Subtropical Agriculture which addresses issues unique to these regions. The Natural Resources Conservation Service's National Cooperative Soil Survey Program provides information necessary for sustainably managing the nation's soil resources.	n.a. The Natural Resources Conservation Service's World Soil Resources Staff gather and interpret soil information for global use.
(f) Promote more efficient and sustainable livestock production systems through the improvement of grazing lands, fodder crops and the use of multiple sources of animal feed;	USDA's Conservation of Private Grazing Land Initiative ensures the availability of technical, educational and related assistance to those who own private grazing land to encourage better land and soil management, more energy-efficient production, sustenance of forage and grazing plants, and other good land use techniques. USDA's Conservation of Private Grazing Land Initiative ensures the availability of technical, educational and related assistance to those who own private grazing land to encourage better land and soil management, more energy-efficient production, sustenance of forage and grazing plants, and other good land use techniques. CSREES operates a Forage, Grassland and Range Program	The Small Ruminant Livestock CRSP supports decision-makers in developing more effective policies and

which facilitates national efforts to enhance sustainable use and production of these resources.

The Bureau of Land Management manages public rangelands, which provide grazing for many of the Western States' livestock producers, to ensure their health, natural diversity and productivity.

Work at NOAA/National Marine Fisheries Service (NMFS) in sustainable aquaculture has expanded. The latest (1997) NOAA Strategic Plan for fisheries calls on the agency to promote environmentally sound marine aquaculture, and recommends various regulatory measures and economic incentives to accomplish that goal.

technologies to improve livestock production, marketing, processing, and natural resource conservation and management; enhance the nutritional status of targeted populations through consumption of livestock products; and increase employment and incomes among livestock producers and associated value-added agribusiness.

Heifer Project International has promoted household and community livestock production with poor farmers for fifty years.

The Soil Management CRSP improves agroecosystem performance through rectification of soil nitrogen, soil phosphorus, soil acidity, soil water, and soil degradation constraints using an integrated nutrient management approach.

The Pond Dynamics/Aquaculture CRSP defines the principles underlying aquaculture management and improves practices, providing increased employment and a dependable, inexpensive source of animal protein. (See 3.4 (a))

(g) Promote development of environmentally sound and sustainable aquaculture well integrated into rural, agricultural and coastal development;

Aquaculture development is both a domestic and international concern. In addition to promoting it domestically, NOAA/NMFS seeks to encourage and facilitate the growth of environmentally sound aquaculture throughout the world. NOAA and FDA staff have participated in a number of workshops and seminars on this general theme as part of the U.S. participation in the Asia Pacific Economic Cooperation, and, in later 1997, NOAA/NMFS experts took part in an FAO-sponsored conference on shrimp aquaculture in Bangkok, Thailand, playing an active role in the development of environmentally sensitive and forward leaning guidelines.

Within NOAA/NMFS, two of the five NMFS fishery science centers have staff newly assigned to research in aquaculture. NMFS has recently established an Aquaculture Coordinator position in the Office of Sustainable Fisheries. And NOAA established the Aquaculture Task Force for the Department of Commerce, and continues to work with USDA and Interior to develop a comprehensive U.S. aquaculture development plan.

(h) Promote the sustainable production and use of food, fodder, fuel and other products derived from forests to enhance food security; such action will also result in increased rural income and employment, thus contributing to sustainable forest management by increasing the value of forests;

The USDA Forest Service and Natural Resources Conservation Service both operate programs which

The USDA Forest Service and USAID fund the International Institute of Tropical Forestry (IITF). The

encourage the sustainable use and production of forest resources and products, including the Forestry Incentives Program and the Stewarship Incentives Program.

IITF provides information on ecosystem management, siviculture, forest utilization, and other fields of renewable resource management.

The National Agroforestry Center is a new cooperative effort between several USDA agencies which cooperates with states, other agencies, and universities to form partnerships, promote cooperation, and leverage resources for the development of agroforestry technology. In doing so, the Center blends agricultural and forestry production and conservation practices and addresses the balance between environmental, economic, and social factors related to agroecosystems.

(i) Seek to ensure effective prevention and progressive control of plant and animal pests and diseases, including especially those which are of transboundary nature, such as rinderpest, cattle tick, foot and mouth disease and desert locust, where outbreaks can cause major food shortages, destabilize markets and trigger trade measures; and promote concurrently, regional collaboration in plant pests and animal disease control and the widespread development and use of integrated pest management practices.

USDA, EPA, and a number of farmers, universities, and NGOs are advocating Integrated Pest Management (IPM) as a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.

The Integrated Pest Management (IPM) CRSP fosters IPM through collaborative research between U.S. and LDC institutions, improving their abilities to develop and implement economically and environmentally sound crop and livestock protection methods.

The Improved Animal Vaccines through Biotechnology Project (Phase I, Rinderpest) is developing and testing a rinderpest vaccine in a recombinant vector that is comparable to the Plowright vaccine in terms of safety and efficacy but which is heat stable and allows differentiation between vaccinated and infected cattle.

OBJECTIVE 3.2: To combat environmental threats to food security, in particular, drought and desertification, pests, erosion of biological diversity, and degradation of land and aquatic-based natural resources, restore and rehabilitate the natural resource base, including water and watersheds, in depleted and overexploited areas to achieve greater production.

To this end, governments, in partnership with all actors of civil society, and with the support of international institutions, will, as appropriate:

Domestically:

Internationally:

(a) Monitor and promote rehabilitation and conservation of natural resources in food producing areas as well as in adjacent forest lands, non-arable lands, and watersheds, and where necessary upgrade sustainably the productive capacity of these resources; and establish policies that create economic and social incentives to reduce degradation;

The Conservation Reserve Program (CRP) is the United States' most ambitious conservation effort, under which about 33 million acres of highly erodible and/or environmentally sensitive land are currently retired from production for 10-15 years and placed under permanent land cover in exchange for annual rental payments. In 1997, the U.S. conducted key analyses in improve the

Throughout the post-UNCED era and during the course of the Leipzig Conference cycle, the United States has continued to emphasize the importance of sustainable development and has opposed efforts to substitute the term "sustained economic growth" for "sustainable development." Sustained economic growth is an unacceptable retreat from UNCED because it downplays

environmental cost-effectiveness of the CRP, including contributions to the redesign of the environmental benefits index used to target land for CRP enrollment.

In 1997, the United States released a new edition of Agricultural Resources and Environmental Indicators, a handbook of data and information that identifies trends in land, water, and commercial input use, reports on the condition of natural resources used in the agricultural sector, and describes and assesses public policies that affect conservation and environmental quality in agriculture. The report also examines the complex connections among farming practices, conservation, and the environment.

(b) Identify the potential and improve the productive use of

the environmental aspects of development. The United States has repeatedly stressed the need for sustainable development as the overarching building block for worldwide economic, environmental, and social progress at all levels: local, national, regional, and global.

On follow-up to the UNCED, the U.S. Government has firmly supported the Commission on Sustainable Development (CSD) as a forum for resolving sustainability issues and has actively participated in various important environmental discussions and negotiations, such as the climate change convention, desertification convention, lead-up to the International Technical conference on Plant Genetic Resources, CSD Intergovernmental Panel on Forests, renegotiation of the International Tropical Timber Agreement, and international and regional agreements on criteria and indicators for sustainable forest management.

The essential role of forests in maintaining productive agricultural systems in many areas of the world is now well-recognized. It is also acknowledged that unsustainable agriculture has led to widespread deforestation around the world, often destroying the vary soil and water conservation functions necessary to support downstream and adjacent agriculture. Since UNCED, the United States has taken steps domestically and internationally to promote sustainable forest management for the full range of socio-economic and environmental benefits. In June 1993, at the European Ministerial Conference on Forests in Helsinki, the United States became the first country to publicly commit to the goal of achieving sustainable management of its forests by the year 2000. President Clinton personally reaffirmed this commitment in his message to the July 1994 World Forestry Charter Gathering at St. James Place, London.

The United States also reaffirms its support for the objectives of the Convention on Biological Diversity (CBD). The conservation of biodiversity and the sustainable use of its components serve important environmental goals. Benefits include new food sources, improved agricultural products and procedures, as well as tools for combating disease and helping maintain the health

national land and water resources for sustainable increases in food production, taking into account the anticipated impacts of natural climate variability and climatic change on rainfall and temperature patterns;	The Bureau of Reclamation of the Department of the Interior has put into place and supervises operation of most of the major dams and associated distribution systems in the arid regions of the western United States that provide water for vast acreages of irrigated crops, municipal and industrial uses, hydroelectric power, and flood control.	of the world's ecological systems. See 3.4 (i)
(c) Develop appropriate national and regional policies and plans for water and watersheds, and water management techniques; promote economically, socially and environmentally sound irrigation improvement, in particular small-scale irrigation, and sustainable intensification of rainfed agriculture, with a view to increasing cropping intensities and reducing the impact of droughts and floods on food output and restoring natural resources, while at the same time preserving the quality and availability of water for other purposes, especially human consumption;	In March 1998, the President released *Water Initiative 2000* which stresses sustainable use and development of the nation's water resources. The USDA's Agricultural Research Service studies global change, hydrology and water resources, erosion and sedimentation, water quality, and the development of improved decision support systems at its Southwest Watershed Research Center. The Environmental Protection Agency has an office devoted to water policy and research in water and watersheds. EPA also has a Nonpoint Source Pollution Control Program to deal with water pollution. The Natural Resources Conservation Service also deals with irrigation, run-off, flood control, sedimentation, and the conservation of soil and water resources on individual farms and private lands generally. The Natural Resources Conservation Service's Watershed Surveys and Planning Program assists Federal, State, and local agencies and tribal governments to protect watersheds and to conserve and develop water and land resources. The focus of the planning aspect is to identify solutions that use land treatment and nonstructural measures to solve resources problems. Additionally, the Small Watershed Program helps participants solve natural resource and related problems on a watershed basis.	n.a.
(d) Promote early ratification and implementation of the Agreement for the Implementation of the Instruments of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks) and of the FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas. Implement sustainable fisheries management and practices, in particular the	The United States was an active participant in and strong supporter of three UN fisheries agreements that, when ratified and implemented, should go a long way toward establishing effective disciplines in highseas fisheries: (1) Straddling and Highly Migratory Fish Stocks -- Fifteen of the 30 ratifications required to bring into force the UN Agreement relating to the conservation and management of Straddling Fish Stocks and Highly Migratory Fish Stocks have been received.	The United States recognizes the importance of other recent environmental agreements for the sustainability of the world's food resources. These include the recently completed Agreement for the Implementation of the Provisions of the United Nations convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks,

Code of Conduct for Responsible Fisheries, to address responsible and sustainable utilization and conservation of fisheries resources in order to optimize the long-term sustainable contribution of fisheries resources to food security - and fully recognizing Agenda 21, and the Kyoto Declaration and Plan of Action within the context of the relevant rules of International Law as reflected in the United Nations Convention on the Law of the Sea by, inter alia, strengthening and establishing, as needed, appropriate regional and sub-regional fisheries management organizations or arrangements, minimizing wastes in fisheries, reducing excess fishing capacity and applying the precautionary approach in accordance with the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks and the Code of Conduct for Responsible Fisheries; by establishing and strengthening integrated marine and coastal area management; by conserving and sustainably utilizing marine and freshwater biodiversity; and by studying the effectiveness of multi-species management in the context of relevant provisions of UNCLOS and Agenda 21. In working to achieve the above, full recognition should be given to the special circumstances and requirements of developing countries, particularly the least developed among them and the Small Island Developing States;

(e) Promote an integrated approach to conservation and sustainable utilization of plant genetic resources for food and agriculture, through inter alia appropriate in situ and ex situ approaches, systematic surveying and inventorying, approaches to plant breeding which broaden the genetic base of crops, and fair and equitable sharing of benefits arising from the use of such resources;

(2) Compliance -- NOAA/NMFS are implementing the highseas compliance agreement, and urging other Governments to ratify and implement.
(3) Code of Conduct -- The NMFS published its Implementation Plan for the FAO Code of Conduct for Responsible Fisheries and the U.S. fishing industry through the Seafood Coalition agreed to Principles for Responsible Fisheries also implementing the FAO Code.
Negotiations are underway to establish regional fisheries management organizations in the southern Atlantic and in the central and western Pacific.

The USDA maintains a vast collection of germplasm at its central facility at Fort Collins, Colorado.

The Plant Patent Act of 1930 and the Plant Variety Protection Act of 1970 established plant breeders' rights for new crop varieties. In the 1980's, judicial decisions established that genetically engineered plants and non-human animal life forms could also be patented. The strengthening of Intellectual Property Rights (IPRs) for biological inventions is controversial. On the one hand, they allow price firms to capture some of the gains from research and thereby increase their incentives to innovate. On the other hand, IPRs increase the market power of these companies and may restrict access to new technology by the scientific community. Public policy to strengthen IPRs

the Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries, and the FAO Ministerial Meeting on Fisheries. The United States places highest priority on ratification and implementation of the Code of Conduct. Priorities include strengthening/creating sub-regional and regional fishery organizations, issues of over capacity and bycatches/discards, and the efforts to promote and strengthen scientific research as the fundamental basis for sustainable development of fisheries and aquaculture activities to ensure food security.

15 of the 30 ratifications required to bring into force the UN Agreement Relating to the conservation and management of Straddling Fish Stocks and Highly Migratory Fish Stocks have been received.

Negotiations are underway to establish regional fisheries management organizations in the southern Atlantic and in the central and western Pacific.

These activities are all worthy of mention as they elaborate the concept of integrating environment and development concerns and are illustrative of a progressive/innovative approach to food security that looks at the "big picture" of what is involved in sustainable agriculture.

See also 3.5 (o).

The USDA distributes over 25,000 samples of germplasm annually to scientists and gene banks in other countries. Further it collaborates in programs of mutual interest in crop improvement and research with countries and international agricultural research centers. The National Agricultural Library assists many countries in establishing electronic connections to databases of agricultural and technological information.

involves a tradeoff between increasing research incentives and monopoly power.

The Natural Resources Conservation Service maintains 26 Conservation Plant Material Centers which provide native plants to solve natural resources problems through biomass production, carbon sequestration, erosion reduction, wetland restoration, water quality improvement, streambank and riparian area protection, and coastal dune stabilization.

USDA Programs in research on animals, animal genomics, animal diseases, animal improvement and waste management are central to improving livestock conservation and utilization.

See 3.1 (e)

(f) Promote the conservation and sustainable utilization of animal genetic resources;

The forest area in the United States has been stable for past twenty years and is currently slightly increasing. A combination of federal, state, and private incentive programs to promote reforestation has resulted in a situation where the annual growth of standing timber volume exceeds the amount of wood that is harvested throughout the United States

USDA research collaboration with other countries on animal infectious diseases are important to animal health and well being throughout the world. USDA and the Department of State continue to support the FAO program on the development of domestic animal databases to identify those animals threatened with extinction and develop appropriate strategies to rescue them.

(g) Reduce the deforestation rate and increase forest coverage, maintain and develop the multiple contributions of forests, trees and forestry to food security for the conservation and sustainable use of land and water resources, including the protection of watersheds, and as reservoirs of biological diversity; to this end, implement the UNCED outcomes related to forests;

The USDA's Forest Service is mainly responsible for the conservation of forest resources in the United States. Through its Stewarship Incentives Program, the Forest Service proves technical and financial assistance to encourage non-industrial private forest landowners to keep their lands and resources productive and healthy.

The Forest Service has moved aggressively to implement sustainable forest ecosystem approaches to the management of national forests. Clear-cut timber harvests have been reduced by more than 80%. The Chief's natural resources agenda focuses on watershed management and the conservation and rehabilitation of forest ecosystems.

The Climate Change Action Plan involves 50 voluntary pollution prevention programs implemented by EPA, the

The United States is a strong supporter of the post-UNCED discussions and actions to promote sustainable forest management, including the Intergovernmental Panel on Forests; the intergovernmental Forum on Forests; the World Forestry Congress; and the G-8 forest action program.

The United States program for future action as presented at the UNGASS in June 1997 calls for all countries to implement the IPF proposals that call for action and to be held accountable for their actions; encouraging responsible forest management activities in the private sector, including voluntary codes of conduct, especially in the forest products industry; improving the assessment and monitoring of forest conditions using internationally agreed

	Department of Energy, the Department of Agriculture, and other Government agencies that seek to prevent greenhouse gas emissions through partnerships with business, government, and other groups by stimulating investments in energy-efficient technology and practices. Combined, these programs have over 3,000 partners. Since 1992, participants have prevented the release of over 6 million tons of greenhouse gas emissions. The State and Local Climate Change Outreach Program is a capacity-building program that provides assistance such as offering training workshops and reference manuals, preparing greenhouse gas emissions reports, developing comprehensive GHG reduction plans, testing innovative policies, disseminating results, providing educational and outreach materials, and examining regional impacts and mitigation policies.	criteria and indicators for sustainable forest management; protecting biodiversity globally; eliminating trade barriers and disincentives to sustainable forest management; and encouraging democratic decision-making.
(h) Seek to understand better the impacts of global environmental threats, in particular climate change and variability, the depletion of the ozone layer, loss of biodiversity and various forms of environmental pollution, on food security;	In 1997, the USDA prepared analyses on the effects of climate change and the possible implications of climate change mitigation policies. Results indicate that (1) there is considerable ability for the agricultural sector to adapt to climate change, (2) regional impacts will differ, and (3) there remain many uncertainties stemming from incomplete understanding of extreme events and the ability of farmers to adapt to extreme events. The analyses also reported on various options to sequester carbon in the soils.	The United States is attempting to decrease the threat of global climate change through assistance to selected countries encompassing efforts to decrease growth in net greenhouse gas emissions and decrease vulnerability to the potential impacts of climate change.
(i) Implement the Leipzig Global Plan of Action;	USDA programs in plant genetic resources fall into nearly all of the 20 priority areas of the Leipzig Global Plan of Action, although we recognize that the Global Plan of Action primarily focused on the needs and deficiencies of developing countries.	USDA collaboration with other countries both bilaterally and multilaterally conform to the Leipzig Global Plan of Action for the conservation and sustainable development of plan genetic resources. The USDA and the Department of State continue to support the unrestricted flow of plant genetic resources for food and agriculture to help ensure that global food security needs are met by scientists developing improved varieties of plants for agriculture.
(j) Promote early ratification and implementation of the United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, 1994, and implement the Convention on Biological Diversity, 1992, the Montreal Protocol on Substances that Deplete the	n.a.	The USDA and USAID offer technical assistance to foreign countries in the conservation of natural resources, the authoring of natural resources legislation, and the

Ozone Layer, 1987, and the United Nations Framework Convention on Climate Change, 1992;

(k) Seek to prevent and control degradation and overexploitation of natural resources in poorly endowed, ecologically stressed areas. In those areas critical to the achievement of food security for developing countries, promote and provide location-specific institutional, infrastructural and technical support.

The USDA has a series of conservation easement programs which encourage stewardship of stressed lands.
The Conservation Reserve Program discussed above (3.2 (a)) encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, wildlife plantings, riparian buffers, filter strips, or other environmentally sound uses. Farmers receives an annual rental payment from the government in return for a multi-year contract.
The Environmental Quality Incentives Program (EQIP) provides technical, educational, and financial assistance to farmers and ranchers to address resource concerns on their lands in an environmentally beneficial and cost-effective manner through the design and implementation of a long-term conservation plan. Fifty percent of the funding for the program is targeted at livestock production.
The Wetlands Reserve Program is a voluntary program to restore wetlands. In exchange for establishing a permanent easement, the land owner receives payment up to the agricultural value of the land and the full cost of the restoration of the wetlands.

creation of national infrastructure to promote conservation through education in the United States, and by sending technical experts to foreign countries for both long- and short-term assignments.

n.a.

OBJECTIVE 3.3: To promote sound policies and programmes on transfer and use of technologies, skills development and training appropriate to the food security needs of developing countries and compatible with sustainable development, particularly in rural and disadvantaged areas.

	Domestically:	Internationally:
To this end, governments, in partnership with all actors of civil society, and with the support of international institutions, will, as appropriate:		
(a) Strengthen agricultural, fisheries and forestry education, training, skills development and extension systems, ensuring equal gender opportunities and close interaction with research systems and farmers, fishers and foresters, in particular small-scale farmers, fishers and foresters, and other food producers, and their representative organizations in food production technology and transfer, and initiate programmes to increase the proportion of women in these systems. National capacity-building efforts, principally in LIFDCs should be supported with North-South and South-South cooperation among education and extension and research institutions;	Strategic principles agreed by the National Association of State Universities and Land Grant Colleges (NASULGC) include research priorities reflecting recognition that the research agenda is global, that it should be consumer-driven, that systems approaches are critical, that educational systems must produce society-ready graduates attuned to life-long learning, that the agricultural system is multi-modal, that we live in an era of new farm bills and new farm policies, that increasingly agriculture and economic activity in general must seek compatibility with environmental stewardship, that agriculture produces non-food as well as non-food products, that agriculture must utilize modern science, and that finite resources imply the need to identify criteria -- including economic criteria -- to establish funding priorities. CSREES is mainly responsible for agricultural technology transfer and extension services within the United States.	Strengthening agricultural fisheries, and forestry education, training, skills development and extension systems, ensuring equal gender opportunity and interaction with research systems and participants, has been a priority of the United States. Technology transfer, particularly focusing on training and skills development with strong emphasis on gender equality and participation, continues to be a component of many U.S. Assistance programs.
(b) Promote viable technology transfer and extension services that meet real local needs; stimulate programmes that will help identify possibilities of bilateral and regional cooperation so that experience and technology information can be exchanged on a South-South and North-South level;	The United States has been and continues to be a leader in agricultural and environmental technology. Many different agencies within the government conduct, encourage, and/or fund cooperative and independent research in new technologies which benefit both producers and consumers, as well as promoting sustainable use of the nation's resources.	See 3.3 (a)
(c) Promote means to reduce women farmers' workload by supporting and facilitating access to appropriate productive and domestic labour- saving technologies;	n.a.	Gender analysis is part of developing all U.S. assistance efforts.
(d) Establish policies and programmes for the development and use of technologies that offer economic and ecological benefits and protect the consumer and the environment.	n.a.	All U.S. development assistance is analyzed on criteria of positive economic and financial payoff on absence of negative environmental impact before approval and implementation.

OBJECTIVE 3.4: To take decisive action in cooperation between the public and the private sectors to strengthen and broaden research and scientific cooperation in agriculture, fisheries and forestry in supporting policy and international, regional, national and local action to increase productive potential and maintain the natural resource base in agriculture, fisheries and forestry and in support of efforts to eradicate poverty and promote food security.

To this end, governments in collaboration with the international and scientific communities, in both the public and the private sectors, as appropriate, will:	Domestically:	Internationally:

(a) Strengthen national research systems in order to develop coordinated programmes in support of research to promote food security. Such programmes should focus on interdisciplinary research to provide a scientific basis for policies and action to maintain the natural resource base while increasing the productivity potential of agriculture, fisheries, including aquaculture, and forestry. Appropriate attention will be given to areas that are less endowed with natural resources. Increased cooperation with the private sector will be promoted;

The United States has a unique and singly successful national agricultural research system which has been largely responsible for an agriculture in which the average farmers produces food for 128 people -- 94.3 in the United States and 33.7 abroad.

Continuous enhancement of agricultural productivity will rely on careful priority setting in public research investments, and the integration of dynamic research tools of biotechnology and genetic engineering with information management. Structuring agricultural research funding opportunities to encourage competition as well as collaboration remains extremely challenging. In addition, issues associated with the sustainability of agriculture including integrated pest and resource management, water and natural resources management, and adaptation to global change will continue to challenge research funding sources. In addition, social science research that assesses the impacts of new technologies and new structural and institutional relationships in agriculture, food science, and related fields relevant to food security remains essential.

Throughout its history, the United States Government has provided leadership and support to food security by investing in agriculture and nutrition research and educational activities (under both Morrill and Hatch Acts, for example) as well as administering food assistance programs, often in cooperation with the States. Technical advance in U.S. agriculture is a shared responsibility
between public and private sectors. Public research is conducted by a system of Federal and State research
institutions, with the Federal government providing more than half of the financial support of this system. Of the Federal money going to State agricultural Experiment Stations, about 60% is administered by the USDA with the rest coming from other Federal agencies. Public agricultural research expenditures grew in real terms by 3-4% per year before 1980, but growth has slowed to less than 1% per year since then. Most current growth comes from private sector contributions; the public contribution is flat. The U.S system is highly participatory; public sector funding is influenced by the political process and private sector funding is dictated by profit.

In 1997, USDA brought together researchers and stakeholders to involved in public and private agricultural research and development (R&D) to consider the relative roles of public and private funders and conductors of research, and the role of U.S. agricultural research institutions in the context of increasing globalization. Results presented included evidence of significant international spillovers of R&D -- mutually beneficial effects of agricultural R&D between the United States and other countries--both through

The United States has been and continues to be a major supporter of research systems for and in developing countries. From 1952 to 1996, U.S. support to international agricultural research, it is estimated to have totaled $3.622 billion in 587 projects. (Total international research support in 1996 is estimated to be $72.78 million.) During this period, U.S. support is estimated to have included: 1) $1.74 billion for NARs, (In FY 1996, it was estimated to total $27.85 million); 2) $415.5 million for university development which has had significant indirect and direct research components; 3) over three-quarters of a billion dollars to IARCs (From 1972-1986 the U.S. followed a policy of providing 25 percent of core funding to the CGIAR. This led to a gradual increase in contributions to a peak of $46.25 million. Since then, budget constraints have reduced the level of US support, although it still maintains third rank among donors. In fiscal year 1998, the U.S. has pledged up to $27 million; and 4) an estimated $262.95 million to Collaborative Research Support Program, established to improve agriculture, both in developing countries and in the U.S. through collaboration between scientists of participating U.S. and developing country institutions (In 1996, CRSPs) establishment totaled $17.45 million)

(b) Strengthen international research systems, in particular the Consultative Group on International Agricultural Research (CGIAR), and promote coordination and collaboration among international, developed country, and developing country institutions;	n.a.	U.S. development organizations support action-research with communities and small-scale producers. They seek to link academic and laboratory research with the needs of local communities. They support efforts to articulate and use indigenous knowledge. The Food Security II project, a research-oriented cooperative agreement relating primarily to Africa, strengthens the capacity of participating countries and USAIDs to analyze food security issues and formulate policies, institutional reforms, investment plans, and management processes that promote food security. ERS monitors and analyses the food security situation in 66 low income countries, projects food security levels for the next decade, and conducts research on the factors affecting longer-term food security. ERS also researches trade liberalization through the WTO and regional trade agreements and its impact on the performance of global markets and prospects for trade, growth, and food security. See 2.3 (d) and 3.4 (h).
© Participate actively in and support international cooperation in research to promote food security, in particular in developing countries, with special emphasis on underutilized food crops in these countries;	n.a.	n.a.
(d) Enhance the institutional framework allowing for the full participation of all interested parties, including indigenous people and their communities, local people, consumers, farmers, fishers and foresters and their organizations and the private sector in the identification of research needs;	The USDA and other government agencies' process of cooperative research ensures the broadest range of input into the identification of research needs and priorities.	n.a.

(e) Promote suitable systems, inter alia participatory systems, for the dissemination and extension of research results;	Appropriate Technology Transfer for Rural Areas (ATTRA) is a national sustainable farming information center funded jointly by the USDA and the private non-profit National Center for Appropriate Technology. ATTRA provides technical assistance to farmers, extension agents, market gardeners, agricultural researchers, and other agricultural professionals in all fifty states on sustainable farming, alternative crop and livestock enterprises and innovative marketing. CSREES provides similar research and informational services.	n.a.
(f) Ensure that gender perspectives are integrated in research planning and implementation;	n.a.	n.a.
(g) Promote development of methods and criteria for the strengthening of integrated and policy relevant scientific knowledge;	See 3.4 (e)	n.a.
(h) Promote research and development leading to the use, at regional, national and local levels, of appropriate technologies, relevant post-harvest and transformation techniques, and adapted plant and animal breeding that meet local needs;	See 3.4 (e)	n.a.
(I) Promote the research needed to continue international efforts to develop, disseminate and apply climate forecast information that will increase sustainable agricultural, fisheries and forestry productivity and be of particular benefit to developing countries.	The Department of Commerce/NOAA has a strong effort in documenting, understanding, and developing a predictive capability for climate variability on seasonal to interannual to decadal time scales, as well as the operational responsibility for producing short range weather forecasts. Weather and climate both strongly impact agricultural yields, and development of a sustainable agriculture requires accurate forecasts on all these time scales. A major source of climate variability on seasonal time scales is the El Nino-Southern Oscillation phenomena. This strongly impacts temperature and rainfall variability over the United States and many areas of the globe and, for example, disrupts fisheries along the west coast of the Americas. NOAA has developed the infrastructure to produce operational forecasts of seasonal climate variability and is working with other Federal Agencies to help mitigate the impacts of short term climate variations.	ERS analyzes the effects of climate and other global environmental changes on agriculture, recognizing farmer's ability to adapt. Based on integrated analysis using economic and geographic data modeling frameworks, ERS finds that possible global changes in temperature and precipitation are not likely to imperil world food production. However, regional impacts will vary. Agricultural production may increase in arctic and alpine regions, but decrease in tropical regions. Impacts on commodity production in mid-latitude regions are mixed.

OBJECTIVE 3.5: To formulate and implement integrated rural development strategies, in low and high potential areas, that promote rural employment, skill formation, infrastructure, institutions and services, in support of rural development and household food security and that reinforce the local productive capacity of farmers, fishers and foresters and others actively involved in the food sector, including members of vulnerable and disadvantaged groups, women and indigenous people, and their representative organizations, and that ensure their effective participation.

To this end, governments, in partnership with all actors of civil society, and with the support of international institutions, will, as appropriate:	Domestically:	Internationally:
(a) Include in their national social and economic development policies, plans and programmes, actions that will foster the social and economic revitalization of the rural sector, with particular regard to the promotion of investment and employment that will make good use of the rural workforce and to the promotion of political, economic and administrative decentralization;	The USDA has a mission area devoted to rural development which consists of three services including the Rural Business-Cooperative Service (RBS), which provides technical assistance and builds partnerships to stimulate rural economic activity; the Rural Utilities Service; and the Rural Housing Service.	n.a.
(b) Strengthen local government institutions in rural areas and provide them with adequate resources, decision-making authority and mechanisms for grassroots participation;	The recently established Joint Center for Sustainable Communities is a partnership of the U.S. Conference of Mayors and the National Association of Counties. It is intended as a clearinghouse for information on examples of self-reliant community initiatives, and will provide technical assistance for areas wishing to develop community-based strategies, conduct leadership workshops for local leaders on community participation, encourage the development of rural compacts, and recognize exemplary communities who have worked toward sustainable communities.	Through a worldwide Participating Agency Service Agreement (PASA) with the Peace Corps, the U.S. supports, in conjunction with local communities, small-scale sustainable development activities in areas of improving human health, protecting the environment, and facilitating economic growth. The SPA program facilitates local grass-roots efforts by combining Peace Corps volunteers' knowledge of local conditions with U.S. technical and financial resources.
(c) Encourage and enable farmers, fishers and foresters and other food producers and providers as well as their organizations, particularly small farmers and artisanal fisherfolk, by strengthening institutional structures to define their responsibilities and protect their rights and those of the consumer;		The U.S. also support activities which increase the capabilities of private voluntary organizations (PVOs) and cooperative development organizations (CDOs) to deliver sustainable development services at the grassroots level in priority areas such as child survival, microenterprise development, women's education, and the environment. A key dimension of these programs is strengthening the organizational capacity and programs of PVOs and CDOs to provide cross cutting support for key development areas. increasingly the U.S. is encouraging collaborative partnerships between U.S. PVOs and CDOs and indigenous organizations to promote development at the local level and to enhance program sustainability and impact. Funds are allocated to individual organizations through competitive grants which include a matching requirement

to leverage additional private resources for development. See also 5.3 (b).

The U.S is directing resources to civil society advocacy groups in an effort to enhance their capacity to effectively mobilize citizen support for political and economic reforms. This includes the strengthening of skills for the engagement of government authorities, political leaders and the media in constructive dialogue on national reform issues: pressuring for the passage of constitutional, legal and institutional reforms; and expressing demands for government and citizen compliance with the rule-of-law. The U.S. and its partners are also supporting reforms for liberalizing the enabling environment in which civil society organizations form and operate. The U.S. supports coalitions among disadvantaged sectors of society (women, labor, small agricultural producers, etc.) and civic organizations engaged in educating the public of the rights and responsibilities of citizens in a democracy. Civil society organizations have proven a useful instrument to promote consensus building in a society, integrate new groups into the political system, advocate reforms, and promote collaboration between the society and state in specific policy areas.

(d) Promote the development and diversification of rural markets, reduce post-harvest losses and ensure safe storage, food processing and distribution facilities and transportation systems;

USDA has a number of different programs to further these goals, including local and regional farmers' markets, and regulations governing food handling, storage and transportation.

n.a.

(e) Reinforce the follow-up to the World Conference on Agrarian Reform and Rural Development (WCARRD), 1979;

n.a.

U.S. NGOs have a variety of initiatives aimed at following up to the 1979 Agrarian Reform conference.

(f) Develop and encourage training programmes in sustainable natural resources management.

USDA's Cooperative State Research, Education, and Extension Service (CSREES) links the research and education programs of the USDA and works with land-grant institutions, colleges of agriculture, agricultural experiment stations, cooperative extension services, schools of forestry, veterinary colleges, schools of family and consumer sciences, and institutions serving minorities to advance a global system of research, extension, and higher education in the food and agricultural sciences and

See 3.5 (b) and (c)

	related environmental and human sciences. CSREES vision focuses on the improvement of economic, environmental, and social conditions, in the U.S., and globally. These conditions include improved agricultural and other enterprises; safer and cleaner food, water and air; enhanced stewardship and management of natural resources; healthier, more responsible and productive individuals, families and communities; and a stable, secure, diverse and affordable national food supply.	
(g) Develop the technical and educational infrastructure in rural areas;	ERS conducts research on the availability of educational services and public infrastructure in rural areas and their importance to the economic development of rural businesses and communities. Projects currently underway examine the importance of skilled labor to rural manufacturers, the impact of highway investments, and the cost of environmental infrastructure for rural communities.	n.a.
(h) Promote the development of rural banking, credit and savings schemes, where appropriate, including equal access to credit for men and women, micro-credit for the poor, as well as adequate insurance mechanisms;	ERS conducts research on the availability and cost of rural credit, and how federal credit policies and credit programs affect access to affordable credit for all segments of the rural economy. The USDA's Rural Business Cooperative Service (RBS) promotes a dynamic business environment and entrepenuership opportunities in rural America. RBS provides loan guarantees on loans made by commercial lenders for working capital, machinery and equipment, buildings and real-estate, and certain types of refinancing. RBS also operates an Intermediary Relending Loan Program which makes direct loans at one percent interest to establish revolving loan funds for businesses and community development projects in rural areas. FarmerMac is the Congressionally-created, publicly owned, secondary market for agricultural real estate and rural housing mortgage loans and was designed to increase the availability of mortgage credit to farmers, ranchers, and rural homeowners, businesses and communities. The Farm Services Agency provides direct loans and loan	U.S. programs help to address the credit and savings needs of countries that have liberalized their financial and macroeconomic policies, and to increase their access to new technologies and productive processes. Working with financial institutions throughout the developing world, USAID experience has shown that, while macroeconomic reforms are essential to the attainment of sustainable development, efficient markets can produce uneven economic benefits because not everyone has the same access to information, technology, credit, and other resources. USAID has helps expand access to financial services for microenterprises, smallholders, and rural business in 44 countries. Last year, support of these institutions resulted in more than 300,000 loans to small-scale entrepreneurs. Women make up 80% of the borrowers. The U.S. promotes the expansion and effectiveness of microenterprise and small business services in facilitating the entrepreneurial activities of the poor, especially women through its Microenterprise Initiative using a three part strategy; 1) direct funding of local lending institutions seeking to be self-sustaining ; 2) strategic (field) support with funding, training, and technical

	guarantees to help farmers who are temporarily unable to obtain private, commercial credit.	services to ensure that microenterprise and small business programs apply the best practices; and 3) technical leadership to both increase the ability to measure the impact of microenterprise services and conduct research and development to solve key problems in microenterprise development, widely disseminating these solutions. See 6.2 (h), 6.2 (i), and 6.2 (l).
(i) Promote food production, processing and marketing systems which increase opportunities for stable, gainful and equal and equitable employment conditions in the food and rural sectors; where appropriate, promote off-farm activities in rural areas combining agriculture, fisheries and forestry production with processing and marketing activities, cottage industries and tourism, particularly in marginal areas and peri-urban areas; *(j) Foster the social and economic organization of the rural population with particular emphasis on the development of small-scale farmers', fishers', and foresters' cooperatives, community organizations and development associations, so that rural inhabitants may be actively involved in decision-making, monitoring and evaluation of rural development programmes;*	USDA's Rural Development mission area assists rural Americans to build competitive businesses and cooperatives that can prosper in the global marketplace. The Farm Services Agency provides a safety net which helps farmers produce an adequate food supply, maintain viable operations, and compete effectively in the international marketplace.	n.a.
(k) Recognize farmers', fishers', foresters', rural workers' and consumers' organizations at local, national, regional and international levels and promote a regular dialogue and partnership with their respective governments and their linkage with all appropriate institutions and sectors on sustainable agriculture, fisheries and forestry and sustainable management of natural resources; *(l) Promote the empowerment of small-scale family farmers, fishers and foresters, both women and men, to set up their own cooperatives and business undertakings, as well as farmers' and fishers' financial and mutual institutions;*	The RBS's Cooperative Services Program assists in the formation of new rural cooperatives and in the improvement of the operations of existing cooperatives by providing technical assistance, conducting research, and disseminating information on cooperatives. USDA works with consumer's organizations and cooperatives through many different types of partnerships, outreach, and extension services.	Support to U.S. cooperative development organizations enables them to assist cooperative movements in developing and middle income countries and new democracies. Cooperative development organizations provide assistance and training to local counterpart organizations in such areas as microenterprise development, housing, credit delivery, dairy development, rural electrification, insurance protection, and cooperative development. U.S. NGOs support the establishment and strengthening of producer and peasant associations and cooperatives. (see above)
(m) Enhance cooperation and exchange among farmers, fishers, foresters and their representative organizations, both within and between developing countries, industrialized countries and economies in transition.	The National Commission on Small Farms was established in 1997 to recommend national policies to address the particular needs of small farms and farmers, and support the creation of more viable small family farms.	(see above)

(n) Develop international South-South technical cooperation programmes that will facilitate the implementation of nutritional programmes that have proved successful in other developing countries;	ERS monitors and evaluates the distribution of income in rural areas and assesses the importance of various factors influencing income growth and income inequality. Recent and on going work has examined the importance of value-added manufacturing activities as a source of rural income, the effect of technological adoption and international trade have on income inequality, and the role tourism and rural amenities play in the development of rural areas.	n.a.
(o) Implement the outcomes of UNCED, particularly as regards Chapter 14 of Agenda 21.	n.a.	Drawing upon the technical expertise of the Institute for Nutrition in Central America and Panama (INCAP), the U.S. funded region-wide fortification of foods (salt, sugar, whet) with essential micronutrients (vitamin A, iron, iodine) in a concerted effort to improve nutrient value of foods. This have been complemented by work to harmonize legislation and trade within the region. The U.S. has supported the special efforts to promote and create private/public sector relationships which have enabled the region-wide fortification to be successful. INCAP has shored with Zambia its' lesson learned on sugar fortification. In a South-South technical exchange, people from Zambia's private industry and ministry officials were brought to visit Guatemala's sugar companies, review regulatory requirements and discuss the full operation of salt fortification with Guatemalan officials. Through PVO implementing partners, the U.S. encourages technical and operational experience sharing by local and international NGOs. The U.S. allocates both Title II food aid resources as well as U.S. dollar funds to technically strengthen programs internationally. See also 6.2 (i). See also 3.2 (g).